

Sky and TELESCOPE

INDEX To Volume IX

This index to Volume IX of "Sky and Telescope" has been arranged to be as useful as possible as a reference guide to the issues. References by title, author, and subject will be found. Authors' names are in *italics*, and articles are distinguished from subject references by initial capital letters and the inclusion of the author's name in the reference.

All books which have been reviewed are listed only under the heading, *Books and the Sky*.

Page references in *italics* indicate that the material is chiefly or entirely photographic. Other illustrative material may be found by referring to major articles on the subject.

Where a major article appears under a subject head, no attempt has been made to index the smaller parts of the subject covered by the article. Many such articles will be found to contain complete discussions.

An index to advertisers is appended.

A

Adams, A. N., 134
Advertisements of J. A. Whipple, The, *Dorrit Hoffleit*, 269
Agnes Scott College observatory, 109
Astronomy at Agnes Scott, *William A. Calder*, 274, 261
All Night With the Stars, *Leland S. Copeland*, 3
Amateur Astronomer as a Community Teacher, The, *George W. Michalec*, I, 267; II, 298
Amateur astronomers —
Amateur Astronomer as a Community Teacher, The, *George W. Michalec*, I, 267; II, 298
Astronomical League, see Astronomical League
Johnson, Emsley W., 191
Kits for the Beginner's Telescope, *Frank A. Myers*, 69
McArtney, James H., 141
mid-central states convention, 167; Amateurs in Central States Meet at Kansas City, *Russell C. Maag*, 242
Scout Camp Gets a Working Observatory, A, *W. M. Graham*, 60
Showalter, J. M., 141
western convention at Palo Alto, 87, 140, 218; Western Amateurs' Convention, *H. A. Wallace*, 291
Wilson, N. C., activity in, 59
Amateur astronomical societies —
AAVSO, see American Association of Variable Star Observers
Astronomical League, see Astronomical League
Beloit, Wis., 140
Black River Astronomical Society, 60
Central Missouri Amateur Astronomers, 167, 190; Central Missouri Amateurs Organize, *Russell C. Maag*, 9
Cincinnati, Ohio, A.A., star party, 35; amateur telescope guild, 140
Columbus, Ohio — A.S. gives patrol camera to Perkins, 18; junior organization, 293
Detroit, Mich., A.S., 113
Duluth, Minn., Darling Astronomy Club, 113
Greensboro, N. C., 140
Hamilton Astronomical Society, New Zealand, 146
Here and There with Amateurs, 61, 65, 177, 285
Indianapolis, Ind., Johnson memorial library, 191
Kansas City, Mo., 167, 268
Lorain, Ohio, 60
Los Angeles, Calif., 113

Amateur astronomical societies — continued

New York A.A.A., 293
Phoenix, Ariz., 113
Pittsburgh, Pa., 140
Pontiac, Mich., 140
Port Arthur, Tex., 141
Raleigh, N. C., 219
Richmond, Va., 113, 167
Sacramento, Calif., 141, 167; publishing A.I.S., 61, 167; star party, 35
St. Louis, Mo., 141
Schenectady, N. Y., 141
Stamford, Conn., 141
This Month's Meetings, 8, 35, 61, 87, 113, 141, 167, 191, 219, 242, 268, 293
Utica, N. Y., 113
Worcester, Mass., 61
Yakima, Wash., 35
American Association for the Advancement of Science, New York meeting, 33
American Association of Variable Star Observers —
solar division, 34
spring meeting, 140; AAVSO Meets at Pennsylvania State College, *Clinton B. Ford*, 219
1948-49 Among the Variable Star Observers, *C.A.F.*, 34
American Astronomers Report, 114, 134, 160, 246, 271, 300
American Astronomical Society —
teachers' committee questionnaire, 206
82nd meeting (Tucson), 33, 110, 114; papers from, 114, 134, 160
83rd meeting (Bloomington), 182, 246; papers from, 246, 271, 300
Apogee, 248
Armillary sphere, 170
Ashbrook, Joseph, book review, 276
Aslakson, Carl L., 10
Asteroids — and Comet Encke collision? 248
and Mars collisions, 273
and meteorites, 272
Baade's object, 138; named Icarus, 139
Close-Approaching Asteroid, A, 161
current positions, 98, 148, 175, 202, 257, 284, 310
families of, 271
Icarus, 138, 139
Kirkwood's gaps, 271
Minor Planet Center, 272
new Trojans, 32
origin of, 84, 271
Wirtanen object, discovered Feb. 22, 1950, 137; A Close-Approaching Asteroid, 161
1950 DA, 137, 161
Astrology, 137

Astronomer, The (poem), *Laban Lacy Rice*, 117
"Astronomical Information Sheets," 9, 61
"Astronomical Journal," 116
Astronomical League, 87, 242
general convention at Wellesley, 87, 112, 140, 166, 192; Wellesley Pictures, *Robert E. Cox*, 235
Middle East convention, 140; Middle East Regional Convention Held at Norfolk, *G. R. Wright*, 218
new members, 87, 113, 140, 141, 167, 190, 219, 242, 268, 293
North Central convention, 140; North Central Regional Convention Held at Oshkosh, *Owen Gingerich*, 190
Northwest region, Northwest Region Convenes at Portland, *James H. Karle*, 8; regional meeting at Yakima, 191, 293
region of central states, 242
Astronomical Society of the Pacific, 164
Astronomy — constants of, 215
highlights of 1949, 35
poetry in, 306
questionnaire for colleges, 206
Astronomy at Agnes Scott, *William A. Calder*, 274, 261
Atmosphere — composition of upper, 56
meteoric dust in? 54
methane in, 300
new layer in, 54
night-sky studies, 184
Seeing, *Dorrit Hoffleit*, I, 57; II, 88
terminology proposed, 185
Atomic physics — berkelium, 117
californium, 165
deuterium reaction, 116
neutral meson, 249
origin of universe, 297
tellurium, radioactive, 249
Aurora — australis, 164
hydrogen lines, 165
19th-century description of, 2
southern, 164
Oct. 14, 1949, 44; Oct. 15, 1949, 44; Feb. 20, 1950, 139; May 27-28, 1950, 228; Aug. 18-20, 1950, 296

B

Baade, Walter, 243, 246
Babcock, H. D., 107
Babcock, Horace W., 106
Back-cover photographs —
Hale telescope, prime-focus cage, 48
Milky Way near Theta Ophiuchi, 232

Back-cover photographs — continued

- moon, between 1st quarter and full, 204;
full, 152
nebula near Eta Carinae, 312
Rosette nebula, northwest corner, 24
solar granules, 260
M81 and companion galaxies, 76
M94, NGC 4736, galaxy in Canes, 288
NGC 147, Cassiopeia, galaxy resolved, 100
NGC 628, galaxy in Pisces, 128 (correction,
175)
NGC 2419, globular in Lynx, 180
Barbier, Daniel, 184
Bartlett, Thomas J., Chamberlin Observatory
Grows, 51
Bell, E. T., book review, 67
Bethe, Hans, 116
Binary stars, see Double stars
Binoculars, 200
Black, James Wallace, 269
Blair, Gilbert Bruce, The Editor of "Astro-
nomical Information Sheets" Dies, *Everett*
W. Harris, 9
"Blue" moons in May, 176
Bok, Bart J., 81, 129, 130
Bond, George P., 207
Bond, William Cranch, 207
"Bonner Durchmusterung," 215
Books and the Sky —
Art and Scientific Thought, Martin John-
son, *Thornton Page*, 118
Atoms in Action, George Russell Harrison,
Fletcher G. Watson, 194
Basic Optics for the Sportsman, Earle B.
Brown, *Robert E. Cox*, 91
Climate Through the Ages, C. E. P. Brooks,
Cecilia Payne-Gaposchkin, 302
Concise History of Astronomy, A. Peter
Doig, *John W. Streeter*, 220
Conquest of Space, The, Bonestell and Ley,
Dorrit Hoffleit, 90
Explanation of Life, The, Stephen Th.
Bornemisz, *Arthur Kohlenberg*, 221
Foundations of Arithmetic, The, Gottlob
Frege, *Arthur Kohlenberg*, 303
History of the Cambridge Observatories,
The, F. J. M. Stratton, *Frank S. Hogg*,
119
History of Nature, The, C. F. von Weiz-
saecker, *Cecilia Payne-Gaposchkin*, 194
Life on Other Worlds, H. Spencer Jones,
Dorrit Hoffleit, 67
Luminous Star Charts, Francis Wilmot,
Owen Gingerich, 303
Measuring Our Universe, Oliver Justin Lee,
Sarah Lee Lippincott, 276
Must We Hide? R. E. Lapp, *Sanborn C.*
Brown, 39
Navigation the Easy Way, Lane and Mont-
gomery, *Frances W. Wright*, 142
Oscillations of the Earth's Atmosphere, M.
V. Wilkes, *Dorrit Hoffleit*, 119
Philosophy of Mathematics and Natural
Science, Hermann Weyl, E. T. Bell, 67
Planet Mars, The, Gerard de Vaucouleurs,
Gerard P. Kuiper, 250
Popular Star Atlas, C.A.F., 66
Practical Spectroscopy, Harrison, Lord, and
Loofbourrow, *Leo Goldberg*, 13
Scientific Autobiography and Other Papers,
Max Planck, *Zdenek Kopal*, 169
Skyshooting, Mayall and Mayall, *Edward*
A. Halbach, 38
Some Early Tools of American Science, I.
Bernard Cohen, *Joseph Ashbrook*, 276
Some Recent Researches in Solar Physics,
F. Hoyle, *Donald H. Menzel*, 195
Stars in Our Heaven, The, Peter Lum,
Helen Sawyer Hogg, 66
Storia dell' Astronomia, Giorgio Abetti,
Cecilia Payne-Gaposchkin, 142
Terrestrial Magnetism and Electricity, J. A.
Fleming, *Armin J. Deutsch*, 168
Voyages to the Moon, Marjorie Nicolson, I.
Bernard Cohen, 12
Bosscha Observatory, 137, 249
Bottlinger, K. F., 295
Bowen, Ira S., 89
Bradley Observatory — Astronomy at Agnes
Scott, *William A. Calder*, 274, 261
British Interplanetary Society, 116
essay contest, 116
Brouwer, Dirk, 271
Brouwer, Dirk, Current Problems of Pluto,
103
Brown, Earle B., editor, Gleanings for ATM's,
all issues
Brown, Harrison, 185
Brown, Sanborn C., book review, 39
Bruce medal, 117
Buckstaff Observatory, 190

C

- Calder, William A., 109
Calder, William A., Astronomy at Agnes
Scott, 274
Californium, 165
Cannon prize, 111
Canopus, 102, 167
Carpenter, Edwin F., 110
Chamberlin Observatory Grows, *Thomas J.*
Bartlett, 51
Chubb Crater, 273
Clemence, G. M., 215
Clock drives, see Telescopes and telescope
making
Close-Approaching Asteroid, A, 161
Clusters, see Galactic clusters, Globular clus-
ters
Cohen, I. Bernard, book review, 12
Color index, 157
Comets — and trans-Plutonian planet, 165, 185
Delavan 1914, 83
Encke's, and Taurids, 248
Minkowski-Harrington, 215
model for, 136
Origin of Comets, The, *Otto Struve*, 82
1843, 82, 84
Constants of astronomy, 215
Copeland, Leland S., All Night With the
Stars, 3
Touring Summer Starlands, 212
Cosmic rays, origin, 115
Cox, Robert E., book review, 91
Wellesley Pictures, 235
Crystallization — and the Moon's Surface,
Crystalline Surface Structures of Radial
Symmetry, *Karl H. Engel*, 6
Lunar Craters in the Laboratory, S. I. Gale
and F. H. Messon, 7, 1
Current Problems of Pluto, *Dirk Brouwer*, 103
Curtis, Heber Doust, memorial telescope at
Portage Lake, 79, 255

D

- Daguerreotyping — Advertisements of J. A.
Whipple, The, *Dorrit Hoffleit*, 269
First Star Photograph, The, *Dorrit Hof-*
fleit, 207, 205
Darwin lecture, 33
Davis, Leverett, Jr., 115
Davis Planetarium, 109
Deep-Sky Wonders, *Walter Scott Houston*,
45, 98, 124, 175, 201, 229, 258, 284, 309
Dennison, Edwin W., and Peter van de Kamp,
The Parallax and Proper Motion of Bar-
nard's Star, 183
Deuterium reaction, 116
Deutsch, A. J., 108, 117
Deutsch, Armin J., book review, 168
de Vaucouleurs, J., 32
Diffraction pattern, 186
Distance modulus, 154, 193
Donn, Bertram, 300
Double stars — Algol minima (current), 20,
44, 96, 124, 149, 176, 201, 228, 258, 284,
309
eclipsing binaries of changing period, 135
Mizar, early photograph, 209
Visual Double Stars, *Otto Struve*, I, 186;
II, 216
32 Cygni, 136
see also Stars

- Douglass, A. E., 111
Draper medal, 185
Duncan, John C., 273
Dyke, Boris, 11

E

- Earth — atmosphere, see Atmosphere
evolution of, 54
geophysical laboratory, 215
magnetic field, 106
Eclipses, lunar —
radio studies during, 35, 49, 50
Oct. 6, 1949, Aristarchus gleam, 43;
changes during, 116; Eclipse of the Moon
Is Widely Observed, The, 19; meteor im-
pact observations, 43; More Eclipse Re-
ports, 43
Apr. 2-3, 1950, 202
Sept. 25-26, 1950, Filming a Sky Spectacle,
Peter A. Leavens, 275; Total Eclipse of
the Moon, *Edward Oravec*, 282
Eclipses, solar —
and Vulcan observations, 138
observations used to study chromosphere,
30, 262
plot of paths, 1950-60, 2
publication on 1952 and 1954 eclipses, 20
Sept. 12, 1950, 242, 262
June 30, 1954, 20
Electronic calculator for orbit computing, 11
Elements — abundance of, 297
berkelium, 117
californium, 165
see also Atomic physics
Engel, Karl H., Crystalline Surface Structures
of Radial Symmetry, 6
Engle, Paul R., Versatile and Well-equipped
Reflector, A, 304
Evans, David S., 10, 137
Evans, John W., 89
Extragalactic nebulae, see Galaxies
Eye as observing instrument, 174
Eyepieces, see Telescopes and telescope mak-
ing

F

- Filming a Sky Spectacle, *Peter A. Leavens*,
275
Fireballs, see Meteors
First Star Photograph, The, *Dorrit Hoffleit*,
207, 205
Focal length, 5
Focal ratio, 5
For Bernhard Schmidt (poem), *Clare Ship-*
man, 301
Ford, Clinton B., AAVSO Meets at Pennsyl-
vania State College, 219
Fox, E. J. Evans, 10
Frank, Philipp, 137
Fujinami, Shigetsugu, A Cassegrainian with
Interchangeable Focal Lengths, 252

G

- Galactic clusters —
distances and velocities, 54
Hyades, dwarf stars in, 160
Occultations of Star Clusters — The Plei-
ades, *Paul W. Stevens*, 307
Pleiades, 307, 309; chart of, 309
Ursa Major members, 301
Galactic Rotation and Cosmic Seasons, *Har-*
low Shapley, 36
Galaxies — clusters of, 246
collisions of, 246
distance modulus, 193
dwarf, 249
Is the Milky Way a Spiral Galaxy? *Otto*
Struve, 263
Magellanic Clouds, 245; Large Cloud, 193
Milky Way, see Milky Way
novae in — distant nova in M81, 249; dis-
tant supernova in IC 4051, 249; nova or
supernova in M83, 184

Galaxies — continued

- observing M33, 45
- peculiar object, 300
- M31, Andromeda, 263; orientation, 32; resolution of, 243; rotation, 243
- M51, Whirlpool, 264
- M81 and others, 50, 76; nova in, 249
- M94, NGC 4736, in Canes, 266, 288
- NGC 147, Cassiopeia, resolved, 78, 100
- NGC 628, Pisces, 128 (correction, 175)
- NGC 5128 — a galaxy? 10
- Gale, S. I., and F. H. Megson, Lunar Craters in the Laboratory, 7
- Gamow, George, 297
- Ganymede, see Jupiter, satellites
- Gartlein, C. W., 165
- Gates, Robert R., The Roman Calendar, 189
- Gauss, 107
- Gaviola, Enrique, 57
- Geology — Galactic Rotation and Cosmic Seasons, Harlow Shapley, 36
- Geophysical laboratory, 215
- Gingerich, Owen, book review, 303
- North Central Regional Convention Held at Oshkosh, 190
- Gleanings for ATM's, edited by Earle B. Brown, 15, 40, 68, 92, 120, 144, 171, 196, 222, 252, 278, 304; see under subjects, authors, or Telescopes and telescope making for subjects
- Globular clusters — and stellar evolution, 132, 163
 - distribution of, 154, 163
 - resolution of, 243
 - M5, 201, 279
 - M13, 229
 - M28, NGC 6626, 132
 - NGC 2419, "intergalactic tramp," 154, 180
- Goggles for observing, 188
- Goldberg, Leo, 300
- Goldberg, Leo, book review, 13
- Gould, Benjamin Apthorp, 116
- Gräef, Carlos, 249
- Graham, W. M., A Scout Camp Gets a Working Observatory, 60
- Graphic Time Table of the Heavens — 1950, 62
- Gravity, studies in, 215
- Greenstein, Jesse L., 115, 301

H

- Haas, Walter H., Four Independent Simultaneous Drawings of Ganymede, 59
- Halbach, Edward A., book review, 38
- Hale telescope, see Mount Wilson and Palomar Observatories
- Halos, solar, 102, 188, 191
- Hamid, Salah El-Din, 248
- Harrington, R. G., 249
- Harris, Daniel L., III, 301
- Hartridge, H., 137
- Harvard College Observatory —
 - ADH Baker-Schmidt telescope, 129, 130
 - Boyden station, 81
 - First Star Photograph, The, Dorrit Hoffleit, 207
 - symposium on photography, 210
- Hayden Planetarium — courses, 273
- Henize, Karl G., 245
- Here and There with Amateurs, 61, 65, 177, 285
- Herget, Paul, 272
- Hess, Seymour L., Some Meteorology of Mars, 155
- Hiltner, W. A., 160
- Himalayan high-altitude station, 11
- Hoag, Arthur, 300
- Hoffleit, Dorrit, Advertisements of J. A. Whipple, The, 269
 - book reviews, 67, 90, 119
 - First Star Photograph, The, 207
 - News Notes, 10, 32, 54, 81, 116, 137, 165, 184, 215, 249, 273, 297
 - Seeing, I, 57; II, 88
- Hogg, Frank S., book review, 119
- Hogg, Helen Sawyer, 111

- Hogg, Helen Sawyer, book review, 66
- Holmes, B. A., A Report from New Zealand, 144
- Houston, Walter Scott, Deep-Sky Wonders, 45, 98, 124, 175, 201, 229, 258, 284, 309
- Humason, Milton, 249

I

- Icarus and the Case of Vulcan, J. Hugh Pruett, 138
- In Focus — ADH Baker-Schmidt, 130
 - Hale telescope, prime-focus cage, 30
 - radio telescope, 50
 - M81 and galaxies in field, 50
 - NGC 147, Cassiopeia, resolved, 78
 - NGC 2419, globular cluster, 154
- In the Current Journals, 11, 32, 54, 81, 116, 137, 165, 184, 215, 249, 273, 297
- India honors scientists, 53
- Indian observatories — high altitude, 11
 - instruments for, 33
- Kodaikanal Madras station, 185
- Instruments — armillary sphere, 170
 - for measuring photographic limb of moon, 134
 - interferometer, 186
 - see also Telescopes and telescope making
- International Astronomical Union, 1951 meeting, 85
- Interstellar comets, 85
- Interstellar matter — and polarization of starlight, 115
 - and rocket collisions, 297
 - in galaxies, 246, 272
- "Irish Astronomical Journal," 273
- Is the Milky Way a Spiral Galaxy? Otto Struve, 263

J

- Jameson, Ellen, 300
- Johnson, Emsley W., 191
- Joy, Alfred H., 117, 160
- Jupiter — and Trojan asteroids, 32
 - comet families, 82
 - satellites — current positions, 21, 46, 228, 258, 284, 310; Four Independent Simultaneous Drawings of Ganymede, Walter H. Haas, 59; Mutual Phenomena of Jupiter's Satellites, 150; observing, 21, 46

K

- Kameny, Franklin E., 300
- Kansas City Museum planetarium, 234
- Kaplan, Joseph, 54
- Karle, James H., Northwest Region of the League Convenes at Portland, 8
- Keenan, Philip C., 134, 247
- Kodaikanal Observatory, 185
- Kohlenberg, Arthur, book reviews, 221, 303
- Kopal, Zdenek, book review, 169
- Koslovskaya, S. V., 216
- Kourganoff, V., and others, The Spectrum of Nova Scuti 1949, 33
- Kron, Gerald, 54, 136, 161
- Kron, Katherine, 54
- Kuiper, Gerard P., 32, 53, 54, 103, 164, 215, 271, 290
- Kuiper, Gerard P., book review, 250

L

- Leavens, Peter A., Filming a Sky Spectacle, 275
- Letters, 2, 26, 102, 167, 188, 206, 234, 262, 306
- Lick Observatory 120-inch reflector, 292
- Life of an Astronomer, The, Joanna Overn, 293, 297
- Light, velocity of, and radio waves, 10
- Lindblad, Bertil, 245
- Link Observatory, 141
- Lions in South Africa, 133, 262

- Lippincott, Sarah Lee, book review, 276
- Lohmann, W., 294
- Lowell, Percival, 104
- Luyten, W. J., 164

M

- MacRae, Donald A., 248
- Magnetism — and polarization of starlight, 115
 - Stars as Magnets, Otto Struve, 106
- Magnitude, see under Stars
- Mars, 155
 - clouds on, 273
 - geology of, 272, 273
 - meteor craters on, 272, 273
 - occultation of star by, 102
 - Some Meteorology of Mars, The Distribution of Mars' Temperature and Its Atmospheric Circulation, Seymour L. Hess, 155
- Marshall, Roy K., 109
- Maryland Academy of Sciences, Graphic Time Table of the Heavens, 62
- Mayall, N. U., 243
- McArtney, James H., 141
- McCoy, D. O., 50
- McCuskey, Sidney W., 245
- McDonald Observatory, 110
- McLaughlin, Dean B., 136, 247
- Meen, V. Ben, 273
- Meggers, William F., 116
- Megson, F. H., and S. I. Gale, Lunar Craters in the Laboratory, 7
- Menzel, Donald H., 81
- Menzel, Donald H., book review, 195
- Mercury — and Vulcan, 138
 - "Elusive" Mercury — Monthly Observations in 1949, Paul W. Stevens, 70, December observations, 98
 - greatest elongation, 270
- Meteor craters — Chubb Crater, Quebec, 273
- Meteor Crater, 10, 114
- Odessa crater, 111
- Wolf Creek crater, 26
- Meteorites — and interstellar travel, 297
 - in Meteor Crater rim, 10
 - micrometeorites, 32
 - origin of, and asteroids, 272
 - Russian fall, Feb. 12, 1947, 5
- Meteoritical Society, 249
- Meteorology —
 - inversion layers, 58, 88
 - solar halos, 102, 188, 191
 - Some Meteorology of Mars, Seymour L. Hess, 155
 - thunderstorms, 53
- Meteors — and associated comets, 136
 - Delta Aquarids, 229
 - fireball reports, 210
 - Geminids, 44
 - hunters' meteor, Oct. 1, 1949, 210
 - Leonids, 20
 - Lyrids, 148
 - medal for meteor study awarded, 32
 - meteoric dust in atmosphere? 54
 - observing — in North Carolina, 44; telescopic, 200
 - on Mars, 273
 - origin of, 84
 - Orionids, 293
 - Perseids, 229; and the moon, 258; train spectrum, 297
 - reporting and tracing, 210
 - Taurids, 20, 293; and Encke's comet, 248
 - trails and seeing, 88
 - train spectrum, 297
 - Oct. 26, 1949, 44
- Michalec, George W., The Amateur Astronomer as a Community Teacher, I, 267; II, 298
- Microfilm service, 119
- Microwave astronomy, see Radio astronomy
- Midnight sun, 234
- Miller, Freeman D., 244
- Miller, Freeman D., The Portage Lake Observatory of the University of Michigan, 79
- Millman, Peter M., 297

Milky Way galaxy—Cygnus star colors, 248
Galactic Rotation and Cosmic Seasons, *Harlow Shapley*, 36
Is the Milky Way a Spiral Galaxy? *Otto Struve*, 263
nebulae near Eta Carinae, 312
Progress in Radio Astronomy, *Otto Struve*, I, 27; II, 55
region near Theta Ophiuchi, 232
Sagittarius starclouds, 37, 214
Some Stars of High Velocity, *Otto Struve*, 294
studies in South Africa, 81
symposium on structure of the galaxy, 182;
Symposium on the Galaxy, 243
Variable Stars and Stellar Evolution, *Otto Struve*, I, 131 (correction, 162); II, 162
Minkowski, R., 243
Minor planets, see Asteroids
Moon, 152, 204
and Venus, 188
"blue" moons in May, 176
conjunction, 248
Crystallization—and the Moon's Surface—
Crystalline Surface Structures of Radial
Symmetry, *Karl H. Engel*, 6; Lunar Craters
in the Laboratory, *S. I. Gale* and *F. H. Megson*, 7, 1
distance (current), see phases and distance,
below
Drawing Lunar Features, *Julian Wallace Graham*, 96; More on Plato, 202
eclipses, see Eclipses, lunar
full, 152
limb, machine for measuring, 134
maps, 206
metals on? 116
observing, see Observing
occultations, see Occultations
opposition, 248
Perseids and the Moon, *Edward Oravec*, 258
phases and distance (current), 19, 44, 70,
97, 124, 150, 176, 202, 229, 258, 281, 310
photograph — early daguerreotypes, 208;
mounted under lens, 191
Plato and Alpine Valley, 96, 202
radio studies of, 35, 49, 50
temperature during eclipse, 35, 50
trip to, 10
Morgan, W. W., 244
Mt. Stromlo Observatory, 32
Mount Wilson and Palomar Observatories—
Hale telescope—mirror installed after polish-
ing, 11; prime-focus cage, 25, 30, 48; re-
port on refiguring, 78

N

Nassau, J. J., 244
Nautical mile, 249
Nebulae—
Crab, and radio radiation, 55
emission, and associated hot stars, 300
extragalactic, see Galaxies
Orion, 98
Rosette, northwest corner, 24
NGC 5128—a nebula? 10; and radio radia-
tion, 55
Neptune—and Pluto, 103
and solar variation observations, 300
diameter of, 54
path of, 1950, 98
Nereid, second satellite, 53
Nereid, 53
New Books Received, 39, 67, 91, 143, 168, 195,
251, 277, 302
News Notes, *Dorrit Hoffleit*, 10, 32, 54, 81, 116,
137, 165, 184, 215, 249, 273, 297
Newtonian telescope, see Telescopes and tele-
scope making
Night-sky studies, 184
Nininger, H. H., 10, 114
Northern lights, see Aurora
Notes on the Secondary Reflection, *Allyn J. Thompson*, I, 196; II, 222
Nova (e)—gas shells around, 246
in Scorpius, discovered July 20, 1950, 284
in M81, 249

Nova (e) — continued

in M83, or supernova, 184
Lacertae 1950 (Bertaud), 102, 105, 137;
spectrum interpretation, 247
Spectrum of Nova Scuti 1949, *V. Kourganoff*
and others, 33
supernova in IC 4051, 249; possible super-
nova in M83, 184
SS Ursae Majoris, 184

O

Observatories—invited to Australia, 32
Scout Camp Gets a Working Observatory,
A. W. M. Graham, 60
see also individual observatories, and Tele-
scopes and telescope making
Observer's Page, 19, 43, 70, 95, 123, 147, 174,
200, 226, 256, 281, 307; see under authors
and subjects for titles
Observing—
All Night With the Stars, *Leland S. Cope-
land*, 3
goggles for, 188
in South Africa, 133, 262
list of miniature constellations, 306
seeing, 137; Seeing, *Dorrit Hoffleit*, I, 57;
II, 88
Touring Summer Starlands, *Leland S. Cope-
land*, 212
Visual Observing Programs for Amateurs,
D. W. Rosebrugh, I, 147; II, 174; III,
200; IV, 226; V, 256; VI, 281; VII, 310
Occultations—
expeditions, 135
non-instantaneous, of Antares, 11
Occultations of Star Clusters—The Pleiades,
Paul W. Stevens, 307
of star by Mars, 102
photoelectric observations, 135
predictions (current), 20, 46, 72, 97, 125,
148, 258, 282, 308
Oersted, 107
O'Keefe, John A., 135
Oort, J. H., 82, 263
Open clusters, see Galactic clusters
Opik, E. J., 273
Optical Society of America, 116, 273
Optics, 5, 31
optical glass windows, 184
reflection, 5; total, 31
refraction, 31
Oravec, Edward (E.O.), Observer's Page
material, all issues
Orbit computing, high speed, 11, 105
Origin of Comets, The, *Otto Struve*, 82
Oxygen layer in atmosphere, 54

P

Page, Thornton, 114, 272
Page, Thornton, book review, 118
Palomar Observatory, see Mount Wilson and
Palomar Observatories
Parallax and Proper Motion of Barnard's Star,
The, *Peter van de Kamp* and *Edwin W. Dennison*, 183, 181
Payne-Gaposchkin, Cecilia, 130
Payne-Gaposchkin, Cecilia, book reviews, 142,
194, 302
Perigee, 248
Perkins Observatory gets patrol camera gift, 18
Pettit, John T., 215
Photoelectric photometry—
night-sky studies, 184
occultation observations, 135
Photography—
Advertisements of J. A. Whipple, The, *Dor-
rit Hoffleit*, 269
Filming a Sky Spectacle, *Peter A. Leavens*,
275
First Star Photograph, The, *Dorrit Hoffleit*,
207, 205
Photographing the Stars with a Small Cam-
era, *Luc Secretan*, 40
solar-lunar camera for, *W. C. Cheney*, 278

Photography — continued

Sunspots Observed Photographically, *Victor W. Killick*, 229
thick emulsions for particle photography, 296
Physics, see Atomic physics
Pickering, William H., 185
Pierce, Newton L., 273
Planetarium Notes, 4, 26, 61, 78, 119, 150, 159,
202, 228, 234, 284, 301
Planetariums—as memorial, 33
see also individual planetariums
Planetary nebulae—distribution, 243
Dumbbell, 258
peculiar object, 300
temperature of central stars, 114
NGC 5128, a planetary? 10
Planets—communication with, 116
composition, 185
configurations, 248, 270
conjunction, 248; inferior, 270; in longitude
and right ascension, 248; superior, 270
direct motion, 299
elongation, 270
essay competition on interplanetary travel,
116
Graphic Time Table of the Heavens, 62
Icarus and the Case of Vulcan, *J. Hugh Pruett*, 138
observing, see Observing
opposition, 248
orbit computing, 11, 105
orbits, 103
origin of, see under Solar system
positions of (current), 21, 45, 73, 97, 125,
149, 175, 201, 227, 257, 283, 309
quadrature, 270
retrograde motion, 299
telescopes for planetary work, see Telescopes
and telescope making
trans-Plutonian planet? 165, 185
see also individual planets and Solar system
Pleiades, 309
Occultations of Star Clusters—The Pleiades,
Paul W. Stevens, 307
Pluto—Current Problems of Pluto, *Dirk Brou-
wer*, 103
diameter, 215; new determination, 290
discovery, 104
Poems—Astronomer, The, *Laban Lacy Rice*,
117
For Bernhard Schmidt, *Clare Shipman*, 301
Poetry—note on Woolf essay, 306
Polarization of starlight, 115
Stars as Magnets, *Otto Struve*, 106
Portage Lake Observatory—
dedication of Curtis telescope, 182
Portage Lake Observatory of the University
of Michigan, The, *Freeman D. Miller*, 79,
77
Present Phase of the Solar Cycle, The, *Paul E. Roques*, 158
Progress in Radio Astronomy, *Otto Struve*, I,
27; II, 55
Proper motion—The Parallax and Proper Mo-
tion of Barnard's Star, *Peter van de Kamp*
and *Edwin W. Dennison*, 183, 181
Pruett, J. Hugh, Icarus and the Case of Vul-
can, 138
Terminology Talks, 5, 31, 64, 86, 105, 133,
157, 193, 210, 248, 270, 299
Ptolemy, magnitudes by, 133

R

Radio—astronomy, Progress in Radio Astron-
omy, *Otto Struve*, I, 27; II, 55
observations of solar eclipse, 262
telescope, 49, 50; Progress in Radio Astron-
omy, *Otto Struve*, I, 27; II, 55
waves, sent around world, 184; speed of in
vacuum, 10
Reber, Grote, 27
Reflectors, see Telescopes and telescope making
Refractors, see Telescopes and telescope
making
Reinmuth, K., 32
Retrograde motion, 299

Rice, *Laban Lacy*, The Astronomer, 117
 Richardson, R. S., 239
 Roach, F. E., 184
 Rockets—and interstellar travel, 297
 data from, 53
 trip to the moon, 10
 Roman Calendar, The, *Robert R. Gates*, 189
Roques, Paul E., The Present Phase of the Solar Cycle, 158
 Rosebrugh, D. W., 11
Rosebrugh, D. W., Casting Lead Counterweights, 15
 Visual Observing Programs for Amateurs, I, 147; II, 174; III, 200; IV, 226; V, 256; VI, 281; VII, 310
 Roy, E. J., Observing Equipment, 279
 Rumford medal, 89

S

Sanford, Roscoe F., 33, 54
 Saturn, 280
 Saturn in September, *Paul W. Stevens*, 283
 Saturn's Rings and Transits of Titan in 1950, *Paul W. Stevens*, 95 (correction, 228); Further Notes on Saturn's Rings and Titan, *Paul W. Stevens*, 123
 satellites—current positions, Dec. 1949, 45, Jan.-May, 1950, 71; Titan transits, see articles under Saturn's rings, above
Scanlon, Leo J., The Solar Filter Problem, 172
 Schlesinger, Frank, 57
 Schmidt, Bernhard, For Bernhard Schmidt, *Clare Shipman*, 301
 Schmidt cameras, see under Telescopes and telescope making
 Schmidt, O. J., 217
 Schuette, Karl, 165
 Schwarzschild, M., 117, 239
 Science—and philosophy, 137
 theory and practice of popular science, 137
 Scout Camp Gets a Working Observatory, A. W. M. Graham, 60
 Secondary mirror, see under Telescopes and telescope making
Secretan, Luc, Photographing the Stars with a Small Camera, 40
 Seeing, 137
 Seeing, *Dorrit Hoffleit*, I, 57; II, 88
 Shapley, Harlow, 245
Shapley, Harlow, Galactic Rotation and Cosmic Seasons, 36
Shipman, Clare, For Bernhard Schmidt, 301
 Shoran, velocity of radio waves determination, 10
 Showalter, J. M., 141
 Sidereal time, see Time
 Sitterly, Charlotte Moore, 5
 Smith medal, 32
 Smith, J. Lynn, 136
 Solar system—origin of, "pancake" theory, 32
 Origin of Comets, The, *Otto Struve*, 82
 see also Planets and under individual planets
 Some Meteorology of Mars, *Seymour L. Hess*, 155
 Some Stars of High Velocity, *Otto Struve*, 294
 Southern Stars, 23, 75, 127, 179, 231, 287
 Spectra and spectroscopy, 64
 absorption, 105
 auroral hydrogen, 165
 chromium, neutral, 107
 classification — of objective-prism spectra, 244; of S-type stars, 247
 continuous, 86
 emission, 86
 interstellar lines, 105
 lanthanum oxide in S stars, 134
 of meteor train, 297
 spectrograph, 86
 spectroscope, 64, 86
 Spectrum of Nova Scuti 1949, The, *V. Kourganoff* and others, 33
 Stars as Magnets, *Otto Struve*, 106
 telluric lines, 105
 temperature gradient in chromosphere, 30
 Turbulence in the Solar Atmosphere, *Otto Struve*, 239
 Zeeman effect, 106

Spitzer, Lyman, Jr., 246
 Springfield mount, see under Telescopes and telescope making
 Stamps, astronomical, 5
 Star clusters, see Galactic clusters
 Star maps—northern, 22, 47, 74, 99, 126, 151, 178, 203, 230, 259, 286, 311
 southern, 23, 75, 127, 179, 231, 287
 Stars—apastron, 248
 Barnard's star, 294; The Parallax and Proper Motion of Barnard's Star, *Peter van de Kamp* and *Edwin W. Dennison*, 183, 181
 binary, see also Double stars
 charts, see Star maps
 circumpolar, north, 153; south, 188
 color index, 157
 double, see also Double stars
 dwarfs, symposium on, 160; late-type, spectra, 160, photoelectric photometer observations, 161
 early-type, and emission nebulae, 300
 evolution, Variable Stars and Stellar Evolution, *Otto Struve*, I, 131 (correction, 162); II, 162
 field, in Bootes, 41; in Corona and Serpens, 42
 First Star Photograph, The, *Dorrit Hoffleit*, 207
 flare stars, 54, 161, 185, 301
 Hertzsprung-Russell diagram, for Population I and II, 164; sequences in, 160
 high-velocity, Some Stars of High Velocity, *Otto Struve*, 294
 magnetic, Stars as Magnets, *Otto Struve*, 106
 magnitude—absolute, 193; apparent, 133; photographic, 157; photovisual, 157; scales of, 133
 motions of nearby, 245
 novae, see Novae
 OB-type, 244
 parallaxes, 300; Parallax and Proper Motion of Barnard's Star, The, *Peter van de Kamp* and *Edwin W. Dennison*, 183, 181
 periastron, 248
 photometry in six colors, 136
 polarization, 115
 Population I and II, see evolution, above
 proper motion, 183
 Proxima Centauri a flare star? 185
 radio stars, Progress in Radio Astronomy, *Otto Struve*, II, 55
 red-dwarf flare stars, 54, 161, 185, 301
 S-type, 134, 247
 Seeing, *Dorrit Hoffleit*, I, 57; II, 88
 Some Stars of High Velocity, *Otto Struve*, 294
 sub-dwarfs, Some Stars of High Velocity, *Otto Struve*, 294
 temperature of central stars of planetary nebulae, 114
 variable, see also Variable stars
 white dwarfs, 161, 164
 Wolf-Rayet, 160
 CQ Cephei, Wolf-Rayet binary, 160
 HD 125248, spectrum, 108
 31 Cygni, 186
 78 Virginis, 106
 see also Milky Way galaxy, Spectra and spectroscopy
 Stebbins, Joel, 136
Stevens, Paul W., "Elusive" Mercury—Monthly Observations in 1949, 70; December observations, 98
 Further Notes on Saturn's Rings and Titan, 123
 Occultations of Star Clusters—The Pleiades, 307
 Saturn in September, 283
 Saturn's Rings and Transits of Titan in 1950, 95 (correction, 228)
 Steward Observatory, 102, 111
Streeter, John W., book review, 220
Strother, Fred P., A Springfield Mounting from War Surplus, 171; note on, 225
 Struve, Otto, 33, 137, 185
 Struve, Otto, Is the Milky Way a Spiral Galaxy? 263
 Origin of Comets, The, 82
 Progress in Radio Astronomy, I, 27; II, 55

Otto Struve—continued

Some Stars of High Velocity, 294
 Stars as Magnets, 106
 Turbulence in the Solar Atmosphere, 239
 Variable Stars and Stellar Evolution, I, 131 (correction, 162); II, 162
 Visual Double Stars, I, 186; II, 216
 Sun—chromosphere, temperature gradient in, 30, 262
 conjunction, 248
 corona, 30, new theory of, 81
 eclipses, see Eclipses, solar
 filters for observing, 172
 granules, Turbulence in the Solar Atmosphere, *Otto Struve*, 239, 260
 halos, 102, 188, 191
 magnetic field, 106
 magnetic theory of solar activity, 81
 midnight, 234
 observing, see Observing
 opposition, 248
 Progress in Radio Astronomy, *Otto Struve*, I, 27
 prominences, new theory of, 81
 seeing scale, daytime, 89
 solar heating, 81
 spectrum, 105; Zeeman effect, 106
 spicules, 81
 sunspots, 139; observed photographically, 229; Present Phase of the Solar Cycle, The, *Paul E. Roques*, 158; publication of observational data, 184; February, 1950, outburst, 139; May, 1950, group, 229
 telescopes for observing, see under Telescopes and telescope making
 Temperature Gradient in the Chromosphere, The, 30
 Turbulence in the Solar Atmosphere, *Otto Struve*, 239, 260
 variation observations using planets, 300
 Sun, Moon, and Planets This Month, The (current), 21, 45, 73, 97, 125, 149, 175, 201, 227, 257, 283, 309
 Sundial in Costa Rica, 306
 Supernovae, see Novae

T

Teaching—The Amateur Astronomer as a Community Teacher, *George W. Michalec*, I, 267; II, 298
 Telescopes and telescope making—
 Cassegrainian—Cassegrainian with Interchangeable Focal Lengths, A, *Shigetsugu Fujinami*, 252; Versatile and Well-equipped Reflector, A, *Paul R. Engle*, 304, 289
 Chamberlin Observatory Grows, *Thomas J. Bartlett*, 51
 clock drives—and photographic effects, 88, Eight-Day Clock Drive, An, *Lawrence Mertz*, 68; Gear-Train Simplification, *Paul B. Sweger*, 93
 counterweights, Casting Lead Counterweights, *D. W. Rosebrugh*, 15
 eyepiece finder, hinged, 122
 flat, see secondary, below
 focal length, 5
 focal ratio, 5
 Kits for the Beginner's Telescope, *Frank A. Myers*, 69
 lens grinding, polishing, and figuring, 144
 lunar and solar camera, by W. C. Cheney, 278
 Newtonian—A 12½-inch Newtonian, *Russell W. Wilkerson*, 94; 16-inch Newtonian by William A. Ervin, 278; Versatile and Well-equipped Reflector, A, *Paul R. Engle*, 304, 289
 observatories—Two Simple Slideoff-Roof Observatories, *William H. Galbraith*, 92; L. L. Rice, 92
 Observing Equipment, *E. J. Roy*, 279
 observing list, 306
 optics of telescopes, 5, 31
 patrol camera by Columbus Astronomical Society, 18

Telescopes and telescope making—continued

- photographic telescopes — Photographing the Stars with a Small Camera, *Luc Secretan*, 40; Solar-Lunar Camera, *W. C. Cheney*, 278
- planetary instruments—Engle reflector, 305; Telescope Designed for Solar System Observations, A. by H. F. A. Tschunko, 120
- Portage Lake Observatory of the University of Michigan, The, *Freeman D. Miller*, 79, 77
- prism, see secondary, below
- radio, see Radio telescope
- reflectors—256, 310; 6-inch by J. G. Goodsell, 173; 8-inch by Dr. W. E. Harris, 146; 12½-inch by E. J. Roy, 279; 17-inch by Paul R. Engle, 304, 289
- refractors—larger, 281; small, 226, 310; solar, 188; 6-inch by B. A. Holmes, 144
- Report from New Zealand, A. B. A. Holmes, 144
- rich-field, 200
- Schmidt telescope — ADH Baker-Schmidt, 129, 130; at Portage Lake, 79; mass-produced lenses, 89
- secondary, Notes on the Secondary Reflection, *Allyn J. Thompson*, I, 196 (correction, 225); II, 222
- Sliding Telescope Tube, A. L. E. Hockett, 68
- solar—refractor, 188; Solar Filter Problem, The, *Leo J. Scanlon*, 172; Solar-Lunar Camera, *W. C. Cheney*, 278
- Springfield mounts—Springfield Mounting from War Surplus, A. *Fred P. Strother*, 171, note on, 225; Tschunko telescope, 120
- surplus gunights, 225
- Tschunko telescope, 120
- Versatile and Well-equipped Reflector, A. *Paul R. Engle*, 304, 289
- Visual Observing Programs for Amateurs, *D. W. Rosebrugh*, I, 147; II, 174; III, 200; IV, 226; V, 256; VI, 281; VII, 310
- Telkes, Maria, 81
- Terminology Talks, *J. Hugh Pruett*, 5, 31, 64, 86, 105, 133, 157, 193, 210, 248, 270, 299
- Thackeray, A. D., 185
- This Month's Meetings, 8, 35, 61, 87, 113, 141, 167, 191, 219, 242, 268, 293
- Thomas, Richard N., 30
- Thompson, Allyn J.*, Notes on the Secondary Reflection, I, 196 (correction, 225); II, 222

- Thunderstorms, 53
- Tillyer, E. D., 89
- Time—Approximate Sidereal Time, *H. Malcolm Priest*, 72, note on, 167
- Eight-Day Clock Drive, An, *Lawrence Mertz*, 68
- Gear-Train Simplification, *Paul B. Sweger*, 93
- permanent daylight saving, time zones, 189
- Roman Calendar, The, *Robert R. Gates*, 189
- Universal, 45, and other issues on Observer's Page
- Titan, see under Saturn, satellites
- Tombaugh, Clyde W., 103, 110, 272
- Touring Summer Starlands, *Leland S. Cope-land*, 212
- Trans-Plutonian planet, 165, 185
- Tschunko telescope, A Telescope Designed for Solar System Observations, 120
- Tucson Trail, *C.A.F.*, 109
- Turbulence in the Solar Atmosphere, *Otto Struve*, 239, 260

U

- UNESCO, 137, 254
- science exhibit, 273
- Universe—composition of, 185, 297
- expansion, 297
- origin, 297
- theory of, 249
- Upper atmosphere, see Atmosphere
- Uranus—and solar variation observations, 300
- path of, 1950, 98
- Urey, Harold C., 54

V

- van de Kamp, Peter*, and *Edwin W. Dennison*, The Parallax and Proper Motion of Barnard's Star, 183
- Vanderbilt University Observatory, 111
- Variable stars—
- Cepheids to determine nearer arm of Andromeda nebula, 32
- maxima (current), 20, 46, 71, 96, 124, 149, 175, 201, 228, 257, 284, 310
- observing, see Observing
- period-luminosity relation, period-spectrum relation, 162
- publication of observations, H.A. 115, 182

Variable stars—continued

- red-dwarf flare stars, 54, 161, 185, 301
- T Tauri variation, 301
- Variable Stars and Stellar Evolution, *Otto Struve*, I, 131 (correction, 162); II, 162
- Velikovsky, Immanuel, 130
- Venus—and moon, 188
- greatest elongation, 270
- visibility at conjunction, 71, 102
- Visual Double Stars, *Otto Struve*, I, 186; II, 216
- Visual Observing Programs for Amateurs, *D. W. Rosebrugh*, I, 147; II, 174; III, 200; IV, 226; V, 256; VI, 281; VII, 310
- Vulcan—Icarus and the Case of Vulcan, *J. Hugh Pruett*, 138
- Vysotsky, A. N., 245

W

- Wagman, N. E., 300
- Wallace, H. A.*, Western Amateurs' Convention, 291
- Watson, Fletcher G.*, book review, 194
- Watts, C. B., 134
- Weather, see Meteorology
- Weaver, H. F., 160
- Wellesley College, 153, 166, 192, 235
- convention, see under Astronomical League
- Wellesley Pictures, *Robert E. Cox*, 235
- Western Amateurs' Convention, *H. A. Wallace*, 291
- Whipple, Fred L., 32, 136, 248
- Whipple, J. A., 207
- The Advertisements of J. A. Whipple, *Dorrit Hoffleit*, 269
- Wilson, Albert G., 249
- Wilson, R. E., 160
- Wilson, Raymond H., Jr., 186
- Wolf Creek crater, 26
- Wood, F. Bradshaw, 135
- "Worlds in Collision," 130
- Wright, Frances W.*, book review, 142
- Wright, G. R.*, Middle East Regional Convention Held at Norfolk, 218
- Wylie, C. C., 272

Y

- Ylem, 297

INDEX TO ADVERTISERS

- Amateur Weathermen of America, 39, 67, 98, 202, 226, 254
- Astronomy Charted, 20, 38, 67, 90, 118, 142, 169, 194, 220, 256, 276, 303
- Ballantyne, F. W., 17, 44, 72, 96, 124, 145, 176, 198, 225
- Blakiston Company, The, 13, 66, 142, 302
- British Interplanetary Society, 17, 174, 221, 254
- Buchelee, Wm., Optical Co., 148
- Bushnell Importers, 18, 44
- Business Press, 39, 90, 148, 194, 250, 303
- Clark, Alvan, & Sons Company, 44, 72
- Clausing, Leroy M. E., 16, 41, 68, 94, 122, 145, 173, 199, 225, 253, 278, 305
- Cyr, Donald Lee, 12, 90, 303
- DePalma Optical Co., 17, 44, 72, 96, 124, 145, 176, 199, 225
- Dioptric Engineering Laboratories, 16, 41, 69, 94, 122, 147, 172, 199, 223, 255, 279, 306

- Edmund Salvage Co., 15, 41, 69, 93, 121, 145, 171, 197, 223, 253, 279, 305
- Goodwin, F. L., 176, 199, 225, 253, 280, 306
- Haines Scientific Instruments, 17, 42, 68, 94, 120, 146, 173, 196, 222, 254, 278
- Harvard College Observatory, 250, 277, 303
- Herbach and Rademan, Inc., 43
- Hogg, James Oliver, Jr., 220
- Hubbard, S. E., 174, 221, 277
- Jaegers, A., 16, 40, 70, 92, 122, 144, 172, 198, 224, 252, 280, 304
- Lusk, C. W., 281
- Macmillan, 250
- Paulson, J. O., 16, 42, 68, 94, 121, 148
- Pelletier's Kachina Shop, 97
- Philosophical Library, 169
- Physics Today, 169, 220, 276
- Polaris D. and M. Company, 19, 43, 72, 95, 174, 200 (see also Starscope)
- Precision Optical Supply Co., 18, 44, 72, 93, 121, 145, 176, 199, 223, 254, 280, 306
- Ronald Press Company, The, 90, 168, 194

- Royal Observatory, 38, 148, 250
- Science Associates, 14, 39, 66, 91, 117, 143, 170, 195, 220, 251, 276, 307
- Scopemaster, J. M., 17, 44, 96
- Sky-Gazers Exchange, 20, 46, 73, 97, 125, 149, 176, 198, 224, 255, 282, 306
- Sky Publishing Corporation, 13, 21, 38, 39, 46, 64, 67, 71, 91, 96, 117, 118, 124, 143, 148, 170, 176, 194, 195, 199, 202, 221, 225, 226, 251, 254, 256, 277, 282, 302, 306
- Skyscope Co., Inc., The, 18, 44, 72, 96, 124, 147, 173, 199, 225, 253, 282, 306
- Starscope, 281, 303
- Synthane Corporation, 18, 42
- Tinsley Laboratories, 19, 42, 71, 95, 123, 147, 173, 200, 226, 256, 281, 307
- Viking Press, The, 12
- Waeldin, 20, 72, 124, 176, 225, 280
- Wolf, David William, 18, 40, 69, 93, 122, 146, 172, 196, 225, 255, 279, 305
- Young, C. C., 16, 44, 69, 94, 121, 146, 172, 199, 223, 255, 279, 305

